

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (cancelled)
2. (currently amended) The method of claim 10, ~~characterized in that the~~ further comprising selecting selection between the use of a weight-based or a priority-based scheduling discipline is made based on the subgroup whereto the packet in question belongs and/or on how the inbound packets of the same class of service received at the scheduler input port preceding or following the packet in question are distributed between the subgroups.
3. (currently amended) The method of claim 10, ~~characterized in that said weight-based scheduling discipline is~~ comprising an SFQ (Start-time Fair Queuing-~~{1}~~) discipline.
4. (currently amended) The method of claim 10, ~~characterized in that said weight-based scheduling discipline is~~ comprising a WFQ (Weighted Fair Queuing-~~{1}~~) discipline.
5. (cancelled)
6. (currently amended) The apparatus of claim 125, ~~characterized in that said apparatus includes further comprising means a device for for decision making~~ choosing between the use of either a weight-based or a priority-based scheduling discipline is carried out based on the subgroup whereto the packet in question belongs and/or on how the inbound packets of the same class of service received at the scheduler input port preceding or following the packet in question are distributed between the subgroups.
7. (currently amended) The apparatus of claim 5, ~~characterized in that said apparatus includes means 12, further comprising a device~~ for carrying out a weight-based scheduling discipline using an SFQ (Start-time Fair Queuing-~~{1}~~) discipline.

8. (currently amended) The apparatus of claim 5, ~~characterized in that said apparatus includes means~~ 12, further comprising a device for carrying out a weight-based scheduling discipline using a WFQ (Weighted Fair Queuing-~~[+]~~) discipline.

9. (new) A method for scheduling link bandwidth between different packet-switched data flows comprising:

classifying digital data packets of fixed or variable length into one of at least two classes of service wherein said classes of service represent a range of service levels between “real-time” and “best-effort” and each class of service is represented by at least one parallel FIFO (first-in-first-out) queue; and

scheduling available bandwidth of transmission links between class-of-service specific FIFO queues using a bandwidth scheduling discipline that ensures instantaneous availability of unutilized portions of bandwidth from all service classes to all effort-based service classes in a specific, consistent, configurable, ratio by assigning a priority value to a packet based on a combination of the packet’s class of service and the subgroup information (such as drop precedence) of the packet or at least one packet immediately preceding or following said packet.

10. (new) The method of claim 9, said bandwidth scheduling discipline comprising at least one of a weight-based scheduling discipline, a priority-based scheduling discipline, or a combination of weight and priority-based scheduling disciplines.

11. (new) An apparatus for scheduling link bandwidth between different packet-switched data flows comprising:

a device for classifying digital data packets of fixed or variable length into one of at least two classes of service wherein said classes of service represent a range of service levels between “real-time” and “best-effort” and each class of service is represented by at least one parallel FIFO (first-in-first-out) queue; and

a device for scheduling available bandwidth of transmission links between class-of-service specific FIFO queues using a bandwidth scheduling discipline that ensures instantaneous availability of unutilized portions of bandwidth from all service classes to all effort-based service classes in a specific, consistent, configurable, ratio by assigning a priority value to a packet based on a combination of the packet's class of service and the subgroup information (such as drop precedence) of the packet and at least one packet immediately preceding or following said packet.

12. (new) The apparatus of claim 11, said bandwidth scheduling discipline comprising at least one of a weight-based scheduling discipline, a priority-based scheduling discipline, or a combination of weight and priority-based scheduling disciplines.

13. (new) A computer readable medium having embodied thereon a program for scheduling link bandwidth between different packet-switched data flows which, when executed by a computer, performs the steps of:

classifying digital data packets of fixed or variable length into one of at least two classes of service wherein said classes of service represent a range of service levels between "real-time" and "best-effort" and each class of service is represented by at least one parallel FIFO (first-in-first-out) queue; and

scheduling available bandwidth of transmission links between class-of-service specific FIFO queues using a bandwidth schedule method that ensures instantaneous availability of unutilized portions of bandwidth from all service classes to all effort-based service classes in a specific, consistent, configurable, ratio by assigning a priority value to a packet based on a combination of the packet's class of service and the subgroup information (such as drop precedence) of the packet and at least one packet immediately preceding or following said packet.

14. (new) The program of claim 13, said bandwidth scheduling discipline comprising at least one of a weight-based scheduling discipline, a priority-based scheduling discipline, or a combination of weight and priority-based scheduling disciplines.

15. (new) The program of claim 14, further comprising selecting a weight-based or a priority-based scheduling discipline based on the subgroup whereto the packet in question belongs or on how inbound packets of the same class of service received at the scheduler input port preceding or following the packet in question are distributed between the subgroups.

16. (new) The program of claim 14, said weight-based scheduling discipline comprising a SFQ (Start-time Fair Queuing) discipline.

17. (new) The program of claim 14, said weight-based scheduling discipline comprising a WFQ (Weighted Fair Queuing) discipline.